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ABSTRACT

The purpose of this report is to describe how Minnesota technical college students can be empowered through vocational education to be full participants in the labor force and to deal with the changes that they encounter in the workplace. Chapter 1 introduces the problem of keeping up with changes in the ways in which work is performed. Chapter 2 focuses on the global economy and ways in which it affects work. It is organized into these sections: (1) the U.S. economic position after World War II; (2) U.S. comparative economic decline; (3) a look at selected U.S. industries; and (4) the changing labor market. Chapter 3 discusses characteristics of work that make it more desirable for workers. Chapter 4 describes learning empowerment strategies that can be used by workers to shape the work place. Galbraith's (1983) three sources of power (personality, property, and organization) and three types of power (condign, compensatory, and conditioned) form the basis of the discussion. Chapter 5 summarizes generalizations related to the global world of work, national manifestations, regional manifestations, company manifestations, and qualities of work. Chapter 6 focuses on policy and practice implications for the technical college system. Implications for practice are further subdivided into curriculum and instruction aspects. Contains 81 references. (YLB)

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Minnesota Research and Development Center for Vocational Education

Empowering Technical College Students in the Work Place

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Empowering Technical College Students in the Work Place

by

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July 1993

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PREFACE

This project was originally designed as the first year-long phase of a three-year project. When it became apparent that funding would not be available for the second and third years of the project, it was decided to develop a report based on investigation and analysis of literature about work and how individuals cope with it.

The research priority to which this project was a response emphasized the importance of technical college students learning to cope with the changing world of work. Following this lead, early investigations were aimed at understanding the world of work and coping behavior. It quickly becomes apparent that learning to cope, as described in the literature, is a therapeutic practice. It is most often used with those who have some form of malfunction with which they need to learn to cope. From this, it was concluded by the project team that an investigation of empowerment, which is more generally applied across populations of people, would fit the technical college students better. Thus, the direction of this study turned from developing coping behavior to empowerment.

Another decision that was made in the early stages of the study, was to examine work from the widest, most comprehensive perspective--globally--and from the point that is closest to the worker--psychically.

The project staff of Dr. Theodore Lewis, Dr. David Bjorkquist, and Mr. Nuri Hassumani functioned as a team. We were greatly aided in our effort by the organization of the Minnesota Research and Development Center for Vocational Education and its Director, Dr. Jim Brown. Dr. Brown also provided valuable help as a thorough editor.

We had help from a special group of people who read a draft of our final report and convened to provide us feedback based on their rich experience and the reality of their present responsibilities. These persons were:

Dr. Tom Gillaspy, State Demographer

Ms. Brenda Hill, Vocational Advisor & Counselor, Northeast Metro Technical College

Mr. Mike Lehn, Automotive Instructor, St. Cloud Technical College

Ms. Mary Jo Mitler, Accounting Instructor, Pine Technical College

Ms. Nora Sayers, Law Enforcement Student, Hibbing Technical College

Mr. Joseph Sertich, Hibbing Technical College

Mr. Frank Starke, President, Alexandria Technical College

CHAPTER 1

INTRODUCTION

The production of the goods and services that are consumed today has changed the ways in which work is performed. There is some work that is no longer done because it is not needed anymore. In some cases, the work has been moved to another place, perhaps on another continent, and production is in the hands of individuals for whom this work is relatively new. Additionally, procedures, instruments, tools, and materials that have not been used before are required in some work. A small portion of all jobs are new. In all, there are few forms of work today that have not been affected by the ways in which goods and services are now produced. All of this is not unnoticed by those who perform the work.

PROBLEM STATEMENT

Consumers have benefitted from the availability of a greater variety of goods that are more consistent in quality and are often sold at lower prices than previously. In addition to goods, services available for purchase have increased lifestyle options. These changes suggest that the quality of life has improved and that higher levels of satisfaction should be achievable. United States' workers are confronted with an increased number of choices, but many of them find that they have less buying power than they did before. Workers in much of the Third World have been reduced to subsistence living by inflation and international economics. At the same time, the work that is available to provide incomes has lost many of its former intrinsic characteristics. In the extreme, there are no clear distinctions between the functions of workers and the machines that they operate. With surpluses of many work skills and abilities and ineffective labor organizations, many workers feel powerless to initiate changes that represent their perspective. As a result, it can be argued that much of the benefit to the consumer has come at the expense of the worker.

Upheavals in the work place have been accompanied by criticism of the educational system in the United States. Much of this criticism has been focused on this country's declining competitive position in the international marketplace, decreased productivity, and the loss of jobs to other First World nations and newly industrialized countries (NICs). As a result, public vocational education, as described in federal laws, has largely been discredited as a means of preparing the work force; and education based on the study of science, mathematics, foreign language, communication skills, and other less job-specific subjects has gained favor. In the public debate, vocational educators have often abandoned the principles on which their field was built and have attempted to join the academics and

prove the supportive nature of the study of work place skills. In the meantime, the action in vocational education has shifted to populations of learners who previously were not the primary audience for work-preparation programs. This includes persons with a wide variety of special needs, women returning to employment after a period of work in the home, and experienced workers, many of whom have been displaced. As a result, formats for delivering vocational education have changed to better conform to those who have a need for it. Courses are offered at off-work times, part-time students are accommodated, child care is provided, and the larger community has become the campus for instruction.

Statement of Purpose

Vocational educators are challenged as they develop and maintain curriculums that keep up with job demands in existing occupations and anticipate changes that graduates will face. Many of these changes can make technical college graduates entering the work place vulnerable to accepting conditions of employment that are less considerate of them than they need to be. The purpose of this report is to describe how Minnesota technical college students can be empowered through their vocational education to be full participants in the labor force and to deal with the changes that they encounter in the work place. This is to be done through (a) gaining a better understanding of the global economy and the ways in which it affects work, (b) recognizing characteristics of work that make it more desirable for workers, and (c) learning empowerment strategies that can be used by workers to shape the work place. The following chapters of this publication are organized according to these themes with a concluding chapter focussed on the corresponding implications for the technical colleges.

CHAPTER 2

THE GLOBAL ECONOMY

It is now almost axiomatic that we live in the global village. Events far beyond national borders impinge almost instantaneously upon the well-being of countries, whether those countries are in the First, Second, or Third World. One sphere of human existence in which the global impact is readily evident is the world of work. The global labor market is upon us. It is not uncommon today to find that the simplest consumer goods are the composite product of the toil of workers from disparate countries--countries different in culture, lifestyle, or stage of economic development. The unionized worker in Detroit must now contend with the threat of easily available, relatively cheap labor in such export processing zones as Thailand or Barbados. These new realities would undoubtedly require new ways of thinking about education for and about work.

How should vocational education respond in the face of a global labor market? What are the implications of the global frame for policy and practice in vocational education? To encourage conversation along these lines, this section of the publication sets forth important components of the global frame, particularly the way in which that frame has impinged upon the domestic economy, and by extension, the domestic labor market and jobs therein. To adequately understand the global economy it is necessary to take a historical perspective, using the immediate post-World War II era as the point of departure. Once this ebb and flow of international economics and politics is understood, today's realities in the national, regional, and local labor markets become more explainable. These realities include the decline of traditional primary industries (such as steel production), the loss of technological edge, plant closings and dislocation, and the growth of the service producing sector that is low wage and low social status.

To address the concerns suggested above, the remainder of this section is organized as (a) U. S. economic position--immediate post-World War II, (b) U. S. comparative economic decline, (c) a look at selected U. S. industries, (d) the changing labor market, and (e) discussion and conclusion.

U. S. Economic Position--Immediate Post-World War II

At the end of World War II in 1945 the United States emerged unchallenged as the dominant economic power internationally.

> The destruction wrought by the war had radically altered the industrial power structure of the world. Three-quarters of the world's invested capital and two-thirds of its industrial capacity were concentrated inside one country, the United States; the rest was shared over the other 95 per cent of the earth's inhabited surface. (Horowitz, 1965, p. 69)

By 1947 European nations left in shambles after the war were seeking the technology and machinery needed to rebuild. Increasingly, and necessarily, they became dependent upon the United States for aid and loans. The Soviet Union too, along with its Eastern European clients, looked to the United States for economic assistance to rebuild roads and bridges, factories, farms, and cities (Stohl & Targ, 1982).

The U. S. economy, stimulated by war production, had doubled the output of the depression years and had thus been experiencing high levels of employment and profits. But a lack of new productive outlets and fear of stagnation led the political elites to think in terms of a new world economic order based on free trade and access to raw materials. Such a world order required a rebuilt and revitalized Europe. For the United States, the political task became how to rebuild Europe while maintaining hegemony. Since European nations needed injections of American capital and technology for revitalization, the U. S. could use its relative economic advantage to gain full penetration of their markets. European demand for dollars would translate into purchases of U. S. goods, thus bolstering the domestic economy. Beyond the economic gains to be derived from market penetration, there were political gains to be obtained by stemming the influence of socialism. Without injections of American aid, countries might find themselves increasingly drawn to central planning and to restricted foreign investments and trade (Blake & Walters, 1987; Vernon, 1985; Stohl & Targ, 1982).

To stimulate European recovery, while simultaneously enhancing the U. S. economy, the policy of choice was to inject large quantities of foreign assistance into the fledgling economies. A clear example of this policy was the bailout of a nearly bankrupt Britain in 1945. In exchange for a $3.75 billion loan, Britain had to end its special trading relationships with British Commonwealth countries, its former colonies, and open up the economies of those nations to U. S. dollars and exports (Stohl & Targ, 1982). On a more general scale, Western European nations benefitted from the provisions of the Marshall Plan, which injected $22.4 billion of aid over a four-year period. According to Stohl and Targ: "The collective impact of the Marshall Plan, and related political developments...incorporated the European nations into a global economic system dominated by the United States" (p. 6).

The new world economic order envisioned by the political elites in the United States required a set of supporting institutional arrangements. At a conference at Bretton Woods in New Hampshire in 1944, held to agree on a system of international payments for the postwar period, the International Monetary Fund (IMF), and the International Bank for Reconstruction and Development (the World Bank) were founded. The purpose of the IMF was to stabilize exchange rates and to provide short-term loans to countries with balance of payments problems. The World Bank's mission was to guarantee loans secured by governments through private sources. Both these institutions came to be "dominated by the United States and its prevailing economic orthodoxies" (Holland, 1987, p. 15). Beyond the IMF and the World Bank, and in keeping with the U. S. post war commitment to the

liberalization of international trade, U. S. policy makers were committed to an agreement which would lead to the outlawing of international cartels, the reduction of national licensing requirements that limited trade, and curbing discrimination in the administration of trade regulations. These notions coalesced in 1947 into the formation of the General Agreement of Tariffs and Trade (GATT).

The GATT has served primarily to create "a form of permanent international oversight and accountability for commercial policies that, prior to its existence, were viewed as exclusively national prerogatives" (Blake & Walters, 1987, p. 13). Signatories to the GATT, by virtue of the "most favored nation" (MFN) principle, are assured that their goods will enter the markets of other members at rates of duty which are no less favorable than those applied to similar products of other countries. Tariff protection for domestic industry is dealt with in a non-discriminatory manner. The level of tariff protection is reduced progressively through successive "rounds" of negotiations.

The GATT has indeed served to bring order to world trade in the post war era. Since its inception, its membership has climbed from 23 nations to 92. World trade has increased fifty-fold (Blake & Walters, 1987, p. 13). But The GATT was not a panacea; all countries did not view it as serving their interests equally. India, for example, was an initial defaulter, claiming that it was a one-way street for the movement of western goods (Holland, 1987, p. 14). Stohl and Targ (1982) argue that:

> While tariff reductions and other restraints on international trade...have been reduced over the years, GATT has served to free trade among the richest capitalist states while maintaining numerous restrictions on the importation of agricultural products from the Third World. GATT has allowed controls in so-called free trade areas like the Common Market, so that production and trade internal to the market were protected by rules excluding outside competitors. (p. 4)

U. S. Comparative Economic Decline

The international economic order of the immediate postwar period was consistent with American designs and ideology. The U. S., by virtue of its economic and political strength, had been the chief beneficiary of these arrangements. But the trade aspect of the new postwar world order was not without its tensions. For one thing, multinational corporations, the main actors in postwar international trade, were less constrained by tariffs as their reach became more global. Since multinationals increasingly invested within foreign countries, they were often able to operate behind tariff barriers. Investment became a substitute for trade. These companies could also adopt diversionary transfer pricing tactics such as under-invoicing of imports and over-invoicing of exports to soften the effects of tariffs (Holland, 1987, p. 15).

Beyond the multinationals, unsettled trade issues among the more developed industrial states festered and have been the cause of contention. As Blake and Walters (1987, p. 15) note, during the 1950s Western states, because of the "primacy of security concerns...and the obvious dependence on the United States", were inhibited from pursuing trade, investment or monetary policies which

appeared to be at odds with U. S. interests. For its part, the U. S., intent on maintaining close relationships with its cold war allies, was prepared to turn the other way when Western European nations or Japan departed from norms set forth by the IMF or the GATT. But by the 1960s and the 1970s, relations between the East and West had thawed substantially. In the meantime, Western Europe and Japan, once dependent on U. S. capital, had become strong enough economically to pursue trade policies of their own designs, not necessarily in accordance with the political, economic, or ideological agenda of the U. S.

By the 1960s, these countries had become able to compete against U. S. goods, both in their home markets and in the U. S. domestic market. By the 1970s and the 1980s, U. S. dominance of international trade, notably in the automobile, steel, and electronics industries had become threatened, not only by Western Europe and Japan, but also by lower income countries in Latin America and Asia. Countries were becoming increasingly inclined to make their own rules. Vernon (1985, p. 778) notes that the impact of the GATT had by 1970 become "asymmetrical." While the U. S. favored tariffs as the means of protecting domestic industry, other countries were increasingly favoring non-tariff means of protection.

By the 1970s the international order envisaged by the U. S. political elites in the immediate postwar period had evolved in ways perhaps not anticipated by them. A watershed was reached in 1971, when, for the first time in this century, the U. S. imported more than it exported. Most critically, the U. S. found itself to be far less sheltered from (or resistant to) external economic shocks than it had been in the early postwar period. This was dramatized by the effects of the oil crises of 1973 and 1974. Such vulnerability to external shocks continued into the 1980s.

To better understand the nature of the decline of U. S. economic preeminence in the 1970s and 1980s it is necessary to look more closely at two important postwar phenomena, namely (1) the growth of multinational corporations and the global scope of their transactions, and (2) the improved significance of the Third World (the South) in world trade.

The Multinationals

The Bretton Woods agreement had made direct private investment in foreign countries possible. This opportunity was seized upon by companies in the developed world so that, by the 1980s, multinationals were virtually controlling world trade. According to Holland (1987), in that decade 200 multinationals accounted for a third of global gross domestic product (GDP). Stohl and Targ (1982) attribute this to the free movement of capital which the institutional structure of Bretton Woods, and the GATT had facilitated. According to Stohl and Targ, this free movement of capital in tandem with direct foreign investment abroad, particularly in the Third World, had created a new "international division of labor." There was now a world-wide reservoir of labor. Technology had become

transportable, rendering geography a less important variable. Jobs could be fragmented. As a consequence of these global possibilities, First World production outside of their borders escalated. The following excerpt from Stohl (1982) is instructive:

> The increase in direct foreign investment by multi-national corporations is an important phenomenon in and of itself. It indicates at least the creation of manufacturing capabilities outside the United States and perhaps the transfer of production capability from the home country to a new production site abroad. Obviously, when multinationals create production outside the United States, they remove that particular production capability from the export equation. When American companies continue to manufacture the product involved, that manufacturing is not done by American workers. (p. 23)

Unlike First World countries, particularly the United States, where the multinationals tend to be the firms that can give a competitive edge to the economy, the Japanese have been loathe to uproot and disperse those firms that form the basis of their export competitiveness. They prefer to keep these firms at home, thereby maximizing, rather than displacing, mass-market, mass-production advantages. Japanese multinationalism has tended to be focussed around weaker but competitive industries that produce standardized, relatively unsophisticated goods such as textiles, radios, fans, and batteries (Franko, 1983, p. 65). Japanese multinationals prefer to concentrate their international production in the NICs of Asia and Latin America, where labor is cheap and abundant, production costs are low, and the economies tend to be fiercely export driven.

Generally, injections of foreign capital into the Third World via multinational trade has served to make the economies of the First World and Third World increasingly more interdependent. One important consequence of this is that some Third World countries have acquired the ability to compete with First World countries, not only in the traditional way (i.e., with raw materials or primary goods production), but via manufactured industrial and consumer goods. This has had important consequences.

The Newly Industrialized Countries

As alluded to above, the Third World has become more of a factor in world trade in the postwar period, and newly industrialized countries (NICs), such as Taiwan, South Korea, Brazil, and Singapore, have emerged as competitors in the manufactured goods market. Much of this has been due to an economic policy shift in these countries from reliance upon import substitution as the engine of growth, to reliance upon export. Financing for the NICs has come primarily from the recycling of surplus petrodollars from the oil boom by Eurodollar markets and multinational banks (Holland, 1987). The NICs have become important as markets for the industrial productions of the First World and as sources of raw material and consumer goods. Indeed, one noticeable change in the profile of U. S.

exports which can be noted within recent times is that exports to the Third World have taken on a new significance. Chichilnisky and Heal, (1986) point out that:

> Fifty years ago most international trade took place among the industrial nations; today 40% of OECD exports are purchased by developing countries. Fifty years ago we questioned whether or not to trade; now we ask how much to trade and how to balance the international and domestic sectors of our economies. (p. 45)

Equally important, is the trade **among** the developing countries. According to Chichilnisky and Heal:

> At present the most dynamic segment of the international market is trade among developing countries, namely South-South trade. Within South-South trade, the most dynamic segment is that of exports of engineering products, which are skill-and-capital intensive rather than labor-intensive. Overall, exports of manufactures from developing countries to developing countries are much more capital-intensive than those to industrial countries, further evidence that by trading among themselves some developing countries are beginning to break out of traditional patterns of specialization. (p. 45)

The emergence of the NICs has been viewed by some as a distinct threat to the world economic order, particularly the preeminence in that order of the older industrialized countries. Schuh (1986) discusses the problem thus:

> Some of these NICs, particularly the smaller ones in Asia, have within a relatively short period of time literally transformed their societies, overcoming much of their poverty in the process. Their success in penetrating international markets has raised serious concerns in the United States and other industrialized countries. The fundamental concern is that the new exporters may have a combination of natural resource endowments, lower cost skilled labor and, in some cases, institutional support that can place them at a competitive advantage in an increasingly wide range of industries. The speed with which the NICs have transformed their societies and emerged on the international scene is a special source of concern. (p. 26)

But while some Third World countries have become economic competitors on a world scale, many experience debt problems on such a scale that import curtailment has become the standard prescription for them. When, however, such countries restrict their imports in order to remedy balance of payments problems, it also means that creditor countries, such as the United States, are denied the option to export to them, thereby aggravating their own balance of trade problems. Paradoxically, investment banks in creditor countries are especially interested in having debtor countries gain access to important First World export markets. Such countries will not be able to service their debts if they cannot find First World markets for their productions. The openness of the U. S. economy to Third World exports, even while some of these countries must restrict imports from the U. S., has had a ravaging effect on the U. S. balance of trade and on the U. S. labor market.

Sewell and Tucker, (1988) argue that the relatively high Third World content of U. S. imports within recent times is related to the fact that the U. S. recovered from global recession faster than other industrialized nations. In the 1980-1984 period, the U. S. share of First World imports from the Third

World increased from 32% to 40%. However, U. S. exports to the Third World (1980-1985) fell by 24.4% while exports to the rest of the world fell by 11.7%. Exports to Latin America fell by 30.9%. Indeed, U. S. exports to 21 countries, all debt ridden, fell by 31.3% during the 1980-1984 period. Decreasing exports and increasing imports could only have had a dysfunctional effect in the U.S. domestic labor market and in the world of work.

Manifestations of Decline

As indicated above, the U. S. had reigned supreme in the immediate postwar period. Its free-market, liberal trade ideology, and the institutional framework accorded by the IMF, the World Bank, and the GATT, had ensured a world order which conformed to U. S. economic and political designs. But that world order has since changed in important ways. As the 1970s approached, the U. S. began losing its grip on its share of direct investments in foreign countries. By 1970 there was a noticeable decline in the U. S. share of world exports and in the U. S. share of the world's reserve currency, relative to 1950. In the meantime, the position of European Economic Community (EEC) countries on these same indices had improved.

Until the 1970s the U. S. dollar had dominated international trade. But gradually, currencies such as the Eurodollar have gained ascendancy. By 1971 decline in the U. S. competitive position had led to the trade deficit alluded to earlier, forcing the devaluation of the dollar. This trade deficit problem has remained that way since, except for 1973 and 1975, reaching what Cohen and Zysman (1988) refer to as "catastrophic levels" in 1984 and 1985. The devaluation of 1971 was followed by a further one in 1973, this time with an important shift from a fixed to a flexible exchange rate. Clearly, the trade challenge of Western Europe, Japan, and the NICs, coupled with the tendency of multinationals to take their business wherever it was most advantageous, was taking its economic toll on the U. S. domestic economy.

In assessing the U. S. economic position in the global economy, given events such as have been described above, Bluestone and Harrison (1982) advanced the thesis that America is "deindustrializing", which they defined as "a widespread disinvestment in the nation's basic productive capacity" (p. 6). They argue that:

> ...the essential problem with the U. S. economy can be traced to the way capital--in the forms of financial resources and of real plant and equipment--has been diverted from productive investment in our basic national industries into unproductive speculation, mergers and acquisitions, and foreign investment. Left behind are shuttered factories, displaced workers, and a newly emerging group of ghost towns. (p. 6)

They note that the U. S. share of world manufacturing has fallen from 25% to 17% over a 20-year period. The trade deficit with Japan reached $10 billion in 1980. While the top Japanese exports to the

U. S. included motor vehicles, steel plates, motorbikes, and video tape recorders, top U. S. exports to Japan included soybeans, corn, fir-logs, hemlock logs, coal, wheat, and cotton. Commenting on this, Bluestone and Harrison (1982) lamented that:

> The trade deficit hides the disconcerting fact that, at least with respect to our most important competitor, the United States has been reduced to an agricultural nation trying desperately to compete with the manufacturer of the world's most sophisticated capital and consumer goods. (p. 5)

Agreeing with the deindustrialization thesis, Cohen and Zysman (1988) reiterate that a loss of competitiveness is evident in the U. S. trade data. They argue that the base of trade in the growing services sector is too small to generate a surplus to compensate for deficiencies in manufacturing. Productivity in manufacturing is growing more slowly than in major competitor nations. Not that there is an absence of high-technology industries, only that the high-tech sector occupies too narrow a range--more in military goods than in industrial goods. These authors argue that the U. S. appears to have, "...a radical inability, relative to our competitors, to apply high technology to traditional goods and to maintain our competitive position by diffusing technology and know-how widely throughout the manufacturing economy" (p. 169).

In a vein similar to Cohen and Zysman (1988), Stohl and Targ (1982) noted a decline in U. S. manufacturing and construction over the period from 1967 through 1976. He notes that by 1979, 43% of all Americans employed in the private non-agricultural economy worked in service and retail trade occupations. Further, that 70% of all new private jobs between 1973 and 1980 had been in these sectors. The question then was whether growth in services can compensate for decline in manufacturing jobs. According to Stohl (1982) the U. S. economy has persistently under-utilized its capacity in manufacturing industries, manifested in large measure in the export of capital by multinationals. Major multinational firms have established new industries that created jobs and export competition abroad. Meanwhile, domestic industries (e.g., steel, automobile, and electronics) have lost their competitive edge.

Sewell and Tucker (1988) tie the loss of jobs in the U. S. economy in the 1980-1985 period to the decline of U. S. exports to the Third World. They argue that in resorting to austerity measures, spending on expensive consumer goods and heavy capital goods has been curtailed, and that these sectors of the economy have suffered most due to Third World recession and debt. Using 1985 as a base year, they argue that 1.7 million U. S. jobs were lost due to recession and debt crisis in the Third World. Of 650,000 jobs lost from 1980-1985, 460,000 were due to the fall of non-agricultural exports. Some 225,000 of these resulted from machine and transport export decline. A further 140,000 jobs were lost in the manufacturing sector, a manifestation of decline in exports (Sewell & Tucker, 1988, p. 190).

Schuh (1986, p. 22) argues that the U. S. remains competitive only in agriculture and services. He points to loss of competitive advantage first in labor-intensive industries, then in capital-intensive industries, and increasingly, in high-technology industries. Comparing the U. S. position with that of Canada, Japan, France, Germany, the United Kingdom, and six NICs, Schuh states that, "An important reason for the decline in competitiveness in the industrial sector is that the United States has lagged in the growth of capital, skilled labor, and research and development scientists relative to overall labor force growth" (p. 28). Using the period 1963 to 1980 as the reference frame, he points out that the U. S. had the lowest growth rate in capital and skilled labor relative to labor force of any country listed; moreover, research and development scientists, relative to the total labor force, actually decreased.

A Look at Three Selected U. S. Industries

A closer look at selected U. S. industries reveals the influence of postwar changes in international trade, and how those changes have altered the nature of labor markets. Those industries chosen come from the besieged manufacturing sector. Kutscher (1985) suggests that the U. S. manufacturing sector can now be analyzed in terms of (a) industries that have experienced long-term secular declines in employment (e.g., food processing, textiles, apparel, tires, rubber, and primary materials such as steel), (b) industries marked by cyclical downturns in employment due to recessions (e.g., new home construction, home appliances, and machinery), (c) the automobile industry, deemed to be a special case, and (d) those industries that have experienced dramatic growth in the 1970s and were not seriously affected by the recessions of 1980 and 1982 (e.g., pharmaceuticals, instruments, communications equipment, plastics, printing and publishing, computer manufacturing, and electronic components). To look more closely at this sector, three U. S. industries (a) steel, (b) automobile, and (c) electronics are highlighted because of their illustrative power.

The Steel Industry

Using Kutscher's (1985) classification system the steel industry could be described as one of the "long-term secular declining industries." It is also one of those industries in which protectionism (against foreign imports) is evident. As Ahlburg, Carey, Lundgren, Barrett, and Anderson (1987) observe, the 1960s was a boom period for U. S. steel production. The U. S. led the world. But this superior status has changed within recent times.

The industry is oligopolistic in structure, four firms capturing up to 50% of the production capacity. Labor tends to be monopolistic--heavily unionized, thus wages have tended to be comparatively high. The comparatively high wages earned by steel workers in good times were not compared to other U.S.

domestic manufacturing. These wages tended to be high when compared with that of steel workers elsewhere in the industrialized world as attested to by Ahlburg et al. (1987):

> In 1982 steelworkers earned a 95% hourly wage premium over workers in other U. S. manufacturing industries. In 1982 steel worker hourly wages were $24.42 in the U. S., $11.03 in Japan, and $13.35 in West Germany. While U. S. labor costs are higher than those of the competitors, the gap is narrowing...Nonetheless, payroll as a percentage of value-added in the United States continues to rise...(p. 232)

Of the value-added in steel production, the high percentage consumed by payroll costs has translated into the decline of labor productivity and hence competitive edge, in the domestic industry. Cline (1986) points out that rising labor costs in the industry were not off-set by rising labor productivity. Thus:

> ...in the decade 1969-73 to 1979-83, output per worker in U. S. manufacturing rose by 22.9 percent while that in steel rose by 23.1 percent, giving no relative rise in productivity. In the same period the ratio of steel wages to U. S. manufacturing wages rose by 22 percent. (p. 226)

The logical consequence of this decline in productivity was an increase in the price of steel. Over the period 1967 to 1978, the relative price of steel rose by 42%. This led to a drop in demand for domestic steel and ultimately to increased demand for imports (and for legislative attempts to protect the industry by curbing imports).

But beyond the problem of declining labor productivity, the U. S. steel industry has suffered a decline in technological advantage as well. Ahlburg et al. (1987) point out that unlike competitors such as Japan, the U. S. steel industry failed to convert from the traditional open hearth furnace to postwar innovations such as the basic oxygen furnace, the electric arc furnace, and continuous casting. In commenting on the failure of U. S. management to introduce these new technologies, these authors cite three reasons (a) insufficient capital, (b) insufficient research and development, and (c) corporate and management style. Even though the industry made attempts in the 1960s to modernize, this was piecemeal. While the competitors were adopting continuous casting, U. S. industry lacked the investment funds to do so and hence lagged behind.

> Over the period 1975-1980 less than 0.6% of steel industry net sales revenue was devoted to research and development. Of this, less than 20% was devoted to basic and applied research on new technologies. The majority of the research and development was for product development. In contrast, over the same period the Japanese steel industry invested 1.6% of net sales revenue in research and development. (Ahlburg et al. 1987, p. 237)

The Automobile Industry

Kutscher (1985) refers to the automobile industry as a special case because it is affected by the cyclical changes brought about by recessions and also by long-term secular decline. The picture of the

U. S. industry painted by Kutscher is as follows:

> Demographic trends indicate limited markets; foreign competition is not abating, and the widespread use of labor-saving technologies is on the horizon. The industry was hurt a great deal during the recession (of 1980-1982). The value of domestic auto production was cut by one-fourth in 1980, followed by an additional 10 percent drop in 1982. Workers in the industry suffered massive layoffs, with employment falling to an annual average of 707,000 by 1982 from a peak of 1 million in 1978. (p. 74)

The picture in the automotive industry is not unlike that of the steel industry. According to Cline (1986), the same relative wage inflation noticeable in the steel industry occurred in the automobile industry. He notes:

> ...auto wages (including fringe benefits) have risen from approximately 160 percent of average U. S. manufacturing wages in the early 1960s to over 200 percent in recent years. Much the same dynamics may be identified as in the case of steel: an oligopoly production structure passing on wage increases negotiated by monopoly labor. As in the case of steel other structural factors have been important (in this case the shift to small cars in response to higher oil prices, combined with the dominance of foreign supply of small cars), but as in steel, wage pressure must be recognized as a significant factor explaining decline in competitiveness. (p. 228)

Cline (1986) talks of U. S. attempts to protect the industry, noting that "The case of automobiles is a vivid illustration of the dominance of politics in U. S. trade policy" (p. 227). He notes that the case of automobiles is more complicated than that of steel due to the emergence of "coproduction" between U. S. and Japanese manufacturers and the strategy of responding to the Japanese challenge by producing off-shore (in Mexico, Brazil, etc.). Also, the growing presence of Japanese and European producers within the U. S. has led to special legislative efforts to specify the domestic content of inputs. Cline notes that protection has heightened the oligopoly power of the industry as a whole. Profits at the three largest Japanese manufacturers have soared.

We get a sense of the new realities of the American automobile industry from Roger Smith, spoken in his capacity as Chief Executive Officer of General Motors (GM). Smith (1988) pointed out that the industry affects the livelihood of one in every six members of the work force. He cited the increasing competitive environment which the production of Japanese companies within America engenders. According to Smith, there is very little in the way of economic advantage separating the combatants. The key would be technology. According to Smith, this technology must be accompanied by management systems that foster human innovativeness. As with the steel industry, Smith pointed to the need for management/labor cooperation as the new technologies are introduced. This requires flatter organizational structures. Speaking specifically about GM's Saturn project, Smith stated that under the Saturn system, "union and worker participation will reach a new plateau in the auto industry" (p. 37). Also key to this new high-technology frontier will be an emphasis on worker training.

But there is a down side to this, and that is that technology replaces labor. To compete in the global marketplace, the labor force in the auto industry must be reduced. This is especially important since the wage component of the total cost of automobiles is approximately 41% (Cline, 1986, p. 228). One way around the problem of cost is to participate in joint ventures, but this too has its price, as Smith (1988) points out:

> In my own industry the bottom line of the joint venture phenomenon is simply this: no vehicle manufacturer can be an island. Increasingly companies like General Motors will be cooperating with other companies around the world to build better products to serve their customers at reduced costs. The industry will be stronger as a result. And while employment in the U. S. auto industry will decrease over the next few years, joint ventures will insure the security of the large majority of our remaining employees and those with supplier companies. (p. 41)

The Electronics Industry

To highlight the impact of global pressures on the electronics industry, two cases are reviewed here; first, the color television industry and then the semi-conductor industry.

The Color Television Industry

As with the steel and automobile industries, the U. S. emerged from the Second World War as the preeminent producer of electronic goods. But within recent times, the industry has forfeited its technological superiority and has been unable to compete with imports. Bywater (1985) makes the following observation:

> In the past ten years alone, the International Trade Commission reported that the number of production workers in the American color television industry fell dramatically from 41,434 in 1973 to fewer than 16,000 in 1983. Thousands of additional jobs were lost in plants which produced related parts and components. This attrition and the loss of sorely-needed job opportunities for American workers have been the direct result of a flooding of imports into the U. S. market, leading to serious economic difficulties for the domestic color television industry. (p. 33)

Bywater attributes import difficulties to "the systematic, widespread and unfair practice of dumping, a practice favored by the Japanese color TV industry for several years" (p. 33).

Beyond the import problem, Bywater (1985) cites the problem of "off-shore relocation by domestic producers of many manufacturing operations, and hence jobs" (p. 33). This, according to him, is compounded by the practice of some U. S. producers of licensing technology to foreign competitors, a strategy which he deems to be "ultimately self-defeating." To stem these difficulties in the color television industry, Bywater argues that "Stronger and more direct action by the U. S. Congress is needed in order to convince other countries that America will fight back" (p. 34).

Expressing the Japanese view of the color television issue and corroborating the views of Bywater (1985), Yamamura (1986) observes that the major Japanese firms (Matsushita, Sony, Sanyo, Hitachi, Mitsubishi, Toshiba, and Sharp) increased their market share in the color television industry in the

U. S. from 3% to 37%, from 1967 to 1977. He argues that beyond managerial and engineering superiority, this advance came about through the policies of the Japanese government. According to Yamamura, such policies included: "protection of domestic market, and lax enforcement of anti-trust statutes..." (p. 179). He notes:

> Essentially the seven major firms were allowed to cartelize the consumer electronics and electric appliance market in Japan; import protection, effective nontariff barriers to the entry of new firms of any nationality, and long-term price-fixing allowed them to charge prices in Japan much higher than those charged for virtually identical goods on the world market. (p. 179)

The policy succeeded in protecting embryonic industries and, ultimately, in helping firms to penetrate the U. S. market, forcing a "near collapse" of the U. S. television industry.

The Semiconductor Industry

Not unlike the color television industry, the U. S. semiconductor industry lost ground in the 1980s to the Japanese industry. As Borrus, Tyson, and Zysman (1986) point out:

> ...the rapid emergence of the Japanese industry as a world-class competitor was not an unexpected outcome of the forces of free trade but rather a planned result of a concerted policy effort. The Japanese government employed a variety of policy tools to nurture its domestic industry and to shield it from foreign competition--mainly from U. S. producers--until it had reached a scale and a level of product quality and sophistication that made it competitive on world markets. (p. 91)

Of concern to these authors is that the semiconductor industry is a critical domestic industry.

> If the United States loses its ability to compete effectively in semi-conductors, it may lose its ability to innovate in both the semi-conductor industry and in related electronics industries and its ability to diffuse electronics-based product and process innovations in a whole variety of actual and potential user industries. (p. 93)

These authors argue that the rapid growth of the Japanese semiconductor industry provides evidence that "strategic government policy" will be the key to U. S. competitiveness in this industry in the next round.

Labor Impact

The cases reviewed above have had important consequences on the work forces in question. Especially in the cases of the steel and automobile industries, there have been substantial work force reductions, the technologizing of processes resulting in the deskilling and downgrading of some jobs and the upskilling of others (leading to the displacement of unskilled workers), and the decline of the power of unions as management moved towards flatter organizational modes ostensibly to facilitate greater worker participation in production decision making.

The Changing Labor Market

Thus far the theme of this publication has been that global factors have impacted upon the U. S. economy in important ways. In this section, this theme is explored further through a closer look at the domestic labor market, specifically, at deindustrialization, economic dislocation and job loss, and changing patterns of work.

As alluded to earlier in this publication, deindustrialization refers to the movement away from an economy driven by production to one driven by services. In the U. S. this phenomenon cannot be disentangled from problems having to do with international competitiveness, (e.g., the decline of the manufacturing sector in the face of import competition and loss of technological edge).

In an analysis of the growth of the services industry, Gorham (1985, p. 84) points out that the shift to services accelerated in the 1970s. Of the 19 million jobs created in that decade, just 11% (amounting to two million jobs) were created in the goods producing sector. Except for a relatively small percentage of new jobs in forestry, mining, and agriculture, the remaining 17 million jobs were in the services sector.

Wise (1989) points out that whereas one-third of the labor force was engaged in goods production in 1970, that fraction was one-quarter in 1987.

> The primary metal industry was decimated, losing close to 500,000 jobs between 1973 and 1985. Sharp decreases in employment also occurred in apparel, textiles, railroad transportation, and fabricated metals. Also noteworthy were the declines that occurred in the auto industry, involving job losses in both production and management. (p. 39)

Wise shows that in 1987, 59% of all employment in the U. S. was in the private services sector. Substantial growth was evident in the retail trade (97.2 million jobs since 1970), as well as in finance, insurance, and real estate. Much of the expansion in the private services sector has been in three areas: (a) health care, (b) business services, and (c) food services. But the wages in these industries are below the average for all industries.

As noted, deindustrialization has led to a disproportionate rise of low-wage jobs. Whereas, in 1969 industries with mean wages below $13,650 accounted for 45.2% of total employment, by 1995 their share is expected to rise to over 52%, according to Gorham (1985, p. 88). Thus, issues of equality and social justice are raised. As Gorham notes:

> The marked growth of low wage industries is even more troublesome if we look at where women and minorities are employed. A high percentage of industries which employ a large number and/or possess concentrations of women and minority workers either pay low average wages or have shown weak employment growth from 1969 to 1982. Women and minorities are also concentrated in occupations which are at the low end of the pay scale...the disproportionate growth of employment in service industries with low mean wages may make it difficult for all workers desiring upward mobility to advance. (p. 89)

Plant Closings and Worker Displacement

Important manifestations of deindustrialization are plant closings, the migration of industry, and the concomitant displacement of workers. In examining these problems in the U. S., Howland (1988) notes that with the decline of manufacturing, "More and more often, manufacturing workers seem to be the victims of plant closings and permanent layoffs in regions and industries where employment opportunities are limited" (p. 1). He states further that within manufacturing, the skill-extensive, high-wage industries (such as the steel industry) experienced the highest employment losses. He cites the Bureau of Labor Statistics to show that approximately 2.6 million manufacturing workers "with previously stable work histories were involuntarily and permanently laid off between 1981 and 1986" (p. 2).

As to reasons why plants close, or why firms relocate, Howland (1988) cites the need to head-off union militancy, declining local markets, and the fact that "intensifying international competition" erodes profit margins.

In a vein similar to Howland (1988), Rothstein (1986) pointed to regional differences in the incidence of plant closings and to dislocations brought about by restructuring. The hardest hit states of the Northeast and the Midwest have higher unemployment than the rest of the country. "The replacement jobs are again nonindustrial, less skilled, lower paying, and very often part-time...The new jobs created by the restructuring of employment have not matched the destroyed jobs either in number or quality" (Rothstein, p. 15). Rothstein's concern was with the seeming passivity with which labor unions react to plant closings, a phenomenon addressed earlier in this publication. He was inclined to the view that, as is the case elsewhere in the industrialized world, there is need for legislative control of plant closings and layoffs in the U. S.

Worker displacement in the current labor market means there are fewer choices available to workers. The jobs that then become available, more likely than not, would not demand of them their optimum levels of expertise. The new jobs may be in a completely new occupational area and perhaps in environments that are heavily reliant on technology.

When workers find that their expertise no longer has the same value in the labor market as it once did, some psychic loss can be expected. Beyond the extrinsic rewards that attend work, there also are intrinsic ones.

In the next section of this publication we dwell on these intrinsic aspects; (a) first, to emphasize that intrinsic rewards in a particular job can be changed because there are a variety of conditions within which that job can be performed, and (b) secondly, out of a concern that should insufficient attention be given to the intrinsic dimension of jobs, a decline in motivation to work could become an unwitting by-product of the struggle to compete.

CHAPTER 3

WORK THAT IS GOOD

In his best selling book, Working, Terkel (1974) reported interviews that he conducted with people in many different occupations about their work. In his book's introduction he identifies the unhappiness of many of those he interviewed.

> For the many, there is a hardly concealed discontent. The blue-collar blues is no more bitterly sung than the white-collar moan. I'm a machine, says the spot-welder. I'm caged, says the bank teller, and echoes the hotel clerk. I'm a mule, says the steelworker. A monkey can do what I do, says the receptionist. I'm less than a farm implement, says the migrant worker. I'm an object, says the high-fashion model. Blue collar and white call upon the identical phrase: I'm a robot. *There is nothing to talk about* the young accountant despairingly enunciates. (p. xi-xii)

The concerns of Terkel's interviewees were not isolated. A variety of reports suggest that work is not good for many today. Global competition and the related moves to become more efficient (Smith, 1988), the shift of jobs from goods to service producing industries (Bureau of Labor Statistics, 1990), jobs made menial by automation (Cherrington, 1980), and the loss of the work ethic (Maccoby & Terzi, 1980) are among the forces that are reported to have intruded in the work place to threaten the continuation of good work.

Work is Needed

In a report of the economics of employment, Carnevale (1984) argued that society in the United States is based on work. Participation by the individual in the culture and polity and the consumption of the goods and services of the society is dependent on the returns from work. This makes the distribution of jobs, good and bad, and the resulting unemployment and differential earnings from work, crucial in fulfilling the democratic principle of equal access. A full-employment economy was the goal set by the Employment Act of 1946 and revived in the Humphrey-Hawkins Act of 1978, which included goals of an overall unemployment rate of 4% with an inflation rate of 3% by 1983. This legislation established a high priority for the elimination of unemployment of those applicants who were able and willing to work. Though the legislation was passed, it was considered to be unrealistic at that time and policies were not put into effect to bring it to realization (Pianin, 1979). It was easier to state a commitment to full employment under the law than it was to establish enabling policy. A policy of full-time employment may help to correct many inequities in the labor market, but it does not assure that the work will be good.

Warnock (1977) connects work with the goal held by many, the good life:

> ...work is, and must always be an important ingredient in the good life; that a life without work would always be less good than a life which contained it; and that to be totally unemployed is

> indeed a dreadful fate. One should help people, no doubt, to bear it, but should not accept it as a normal or ultimately tolerable condition. (p. 144)

She also stated that it is better to have a job, even if it has many features that are bad, than it is to be without work and that it is "...probably better to work hard at it than less hard" (p. 144).

The Need for Good Work

Concern about the conditions of work and having work that satisfies the worker did not originate when the factory system was introduced or with the development of automation. Some form of work seems to have always occupied a major portion of the lives of adults, thereby offering a possible explanation for this long standing interest. Though the curiosity about good work is very old, it is also very new.

In Homeric Greece, work was good because it was the emulation of the gods. Even the gods and goddesses did the work of tending sheep, spinning thread, weaving cloth, plowing, and mowing. The family economy, consisting of kinfolk and servants, observed a division of labor with an allocated portion to each member. Outside the family there were wheelwrights, carpenters, smiths, leather workers, and other artisans (Kaiser, 1966).

Among the Romans, agriculture and soldiering were held in the highest esteem. From the earliest times, the crafts were not given importance. With the large numbers of citizens required for military service and the resulting casualties of war, the land fell into the hands of a few owners who farmed with slaves. Thus farming fell into disdain and there was a flight to the city. Working for gain was scorned because there were hordes of slaves from wars to provide those things that were necessary for living. Slave labor depressed the value of free work and led to widespread contempt for both handicrafts and husbandry. The esteem of aristocrats for the farm was but a sophisticated and artificial form of romanticism (Kaiser, 1966).

As understood by the Romans, work was not good because it reduced freedom. There were slaves to do the work and it was implied that those who required employment were short of intellectual, financial, or other resources. Good work in Roman society was that modeled by the landowners, soldiers, and others who could debate the issues of the day, while being cared for by the productivity of those who grew and prepared the food, crafted the physical surroundings, and reared the children. By requiring it of some and not of others, work itself was demeaned by society.

By contrast, early leaders of the Christian church espoused the benefits of work for all people. Rather than being a form of punishment, work was a means of sharing in God's providence and perfecting what had begun with the creation. Clement, (as quoted in Kaiser, 1966) in the third century, stated that wealth was no excuse for idleness and that work was for all. "...work has a personal moral value beyond any economic return. It is part of the Christian ideal of life" (Kaiser,

1966, p. 87). During the fifth century, St. Jerome advocated work to make the worker self-supporting, to enable giving to the needy, and as a help in forming a life in holiness. St. Augustine linked work and contemplation, especially in work on the land. "Communing with nature in his work, man is led to praise" (Kaiser, p. 110). In the context of early Christian religion, work was good. St. Benedict prescribed a regulated day for the brothers in which seven hours ought to be occupied with manual labor and two hours with sacred reading (Bennett, 1926).

During the Renaissance, the reasons for work could be found in the work itself (Best, 1973). The activity of the work placed the worker in touch with the earth, other humans, and ennobling ideas. One of the functions of work was to uplift the worker in ways that other endeavors could not do. It was good to work because it benefitted the worker in ways that no other activity could do, and all forms of work were considered to be good.

The Protestant reformers, Luther and Calvin, based much of their interpretation of work on the writings of Paul and other apostles. The Renaissance concept of work which found the reason for work in the work itself differed from the religious significance of work taught by the reformers. Luther and Calvin believed that all work was equally worthy in the eyes of God and that there was not a higher value assigned to the work of clerics and others in the church as compared to the work of others (Calvin, 1851; Luther, no date). Work was not dichotomized as either sacred or secular, and all work was a gift of God to be performed faithfully. All honest work was a form of worship and was honored by God (Billings, no date). In the United States, the Puritans extended the teachings of the Protestant reformers to include the principle that God rewarded those who worked industriously with thrift and sobriety. An individual's prosperity was recognized as evidence of the worker's practice of these canons and the return of God's blessing (Wertenbaker, 1947).

Parallels between the plight of workers of the past and those of today can be identified, but it is difficult to conclude how we are influenced by historic ideals. Corson (1988) contends that neither the Renaissance nor the Protestant view of work is fashionable today. The Renaissance ideal of work is not generally attainable because opportunities to experience the joy of creative work are limited to a small number of individuals. The teachings of the Protestant reformers that all work is a gift of God and therefore good work are less influential today as fewer people search for religious rewards in their work. The mores of society and the nature of contemporary work cause many to question that their work is a gift, particularly from God. Many of today's workers are motivated more by opportunities for advancement and self-fulfillment (Braden, 1988).

Workers in various parts of the world or with differing traditions may have different concepts of work and what makes it good. Mahatma Gandhi taught that morality was the foundation of life and that work was an act of self-surrender. In order to avoid selfish motives, workers placed themselves in the hands of God to do the greatest good for all. This assured the success of the work and brought

peace and satisfaction to the worker. For Gandhi, labor was far superior to capital. It was equally immoral for capitalists to steal the legitimate fruits of the worker's effort as it was for workers to destroy the industries and tyrannize the capitalists by exaggerated demands. Because of his experience with "...lazy intellectuals, middle men, and aristocrats" (Datta, 1953, p. 106), Gandhi recognized that when manual work was performed by particular classes of people, social stigma were attached to both the work and the worker. Therefore, he advocated work that required some physical exertion for all workers. In addition to being an agent of equality, this work helped to keep the body fit without artificial exercise and medicines.

Another view of work that has carried into the modern era is that of Karl Marx (1906). Marx's theory stated that alienation is a social relationship that results from the separation of workers from the process and product of their labor. As capitalists reap the primary benefits of production, the goods and services produced lose their meaning to the workers. The work processes gain more control of the workers who become more servants of the machines of production. Instead of having a meaningful purpose, work appears merely as a means to survive through earning money. This alienation produces a devastating effect on the lives of workers, dislike for the work itself, lack of identification with work processes, and preoccupation with more "animalistic" functions. The quality of good work, to be found in free and creative activity, is denied as workers are alienated from their work.

According to Buddhist beliefs, work should provide a chance to utilize and develop the worker's faculties, enable the worker to overcome ego-centeredness by joining with others in a common task, and produce the goods and services needed for existence.

> To organize work in such a manner that it becomes stultifying, or nerve-racking for the worker would be little short of criminal; it would indicate a greater concern with goods than with people, an evil lack of compassion and a soul-destroying degree of attachment to the most primitive side of this worldly existence. (Schumacher, 1983, p. 55)

For the Buddhist, mechanization could be used positively to enhance the worker's skill and power, or it could diminish the worker by turning the work over to a mechanical slave, leaving the worker to serve the machine.

Carnoy and Levin (1985) stated the thesis that from the early nineteenth century, the U. S. work place has generally been characterized by conflict between two groups. One faction consisted of the great majority of persons who sold their labor for wages. The second was those who owned the property and capital used for production. The general aims of the holders of capital were to create a highly centralized and bureaucratic work place in which jobs were fragmented into repetitive and routinized tasks that simplified the extraction of labor from workers. However, it was contended that these methods did not necessarily represent the most effective way of doing business. Instead, they merely represented a way to increase control of the work force and to extract profits through its labor.

They charged that this system has resulted in the accumulation of capital for owners but has resulted in work that did not support personal growth, was injurious to health, and was a disappointing experience for most members of the work force.

Workers have responded to the conditions of work in a variety of ways. For example, Cornfield (1987) described changes in the response of labor unions from pre-World War II mechanization to post-World War II automation. From 1910 to 1930, among blue collar workers, the number of semi-skilled and unskilled workers grew at a more rapid rate than did the number of skilled craft workers in manufacturing. Between 1950 and 1982 the percentage of white collar workers in manufacturing increased from 24% to 36% while the overall percentage of blue collar workers in manufacturing decreased from 74% to 62%. Most of the blue collar decline was in jobs for unskilled workers. As routine, repetitive jobs have been eliminated by automation, organized labor has turned to training to prevent technological unemployment. Unions rallied behind the 1962 Manpower Development and Training Act, which was designed to provide training and retraining for workers displaced by automation. Training, provided by employers with union participation, was part of almost one-half of the labor agreements in effect in 1966-67. Through its advocacy for training, organized labor was attempting to provide for the upgrading of its members rather than having job choices limited by the downgrading effect of automation.

Characteristics of Good Work

The rapid development of the industrial system in the U. S. after the Civil War and into the early twentieth century made skills that had lead to work place success in an earlier era obsolete (Kliebard, 1990). Those who were masters of crafts were no longer needed in great numbers within the factory. The factory was designed to reduce the human skills required for production. These changes represented a degradation of labor and were direct challenges to the ethic of work and dignity of workers. Kliebard identified two counter efforts. The first was the craft movement in which an older form of artisanship was resurrected, not as a means of earning a living, but as a source of satisfaction in itself. The other was voiced by such social reformers as Jane Addams and John Dewey. For them, modern labor had become drudgery because people were not educated to understand the industrial system in which they worked. Workers should be taught to understand the relationship of what they are doing to the finished product and to position the nature of work in the larger social context (Kliebard). Those in the handicraft movement described good work as an enriching diversion from the degradation of factory work. Addams and Dewey advocated that work can be made good through raising the consciousness of the worker about the context within which a job is performed and through understanding the social significance of the work.

There may be a present day romanticism about the forms of work in the past and a tendency to revere work that often was physically demanding, tedious, toilsome, and even life shortening. There are recollections of the banker who knew client's names and faces, the carpenter who created works of art with a saw and chisel, the physician who made house calls, the blacksmith who could make intricate metal shapes on an anvil, and the housewife whose reward was in the pleasure of her family eating a home cooked meal. These and other examples may be useful in forming a concept of good work but they cannot be accepted without discriminating between those characteristics that made the work good and other features that were necessary parts of the job. Some attributes of good work suggest universals that transcend time and place. Others may be fixed by the combination of elements of purpose, worker, technology, and social and economic setting.

The anthropologist, Turnbull (1983) described intercultural comparisons of adult activity in the cycle of life. He observed that adulthood was consumed more by work than play, but for a fortunate few, work and play were so integrated that they could not be distinguished. In some cultures, work was doing whatever you were doing at a particular moment in life, provided it was socially approved. "In Western culture, we too often limit our concept of doing [working] to what becomes an economic burden, supporting ourselves, and our families and leaving everyone else to do the same as best they can" (p. 174). Clearly, Turnbull saw a contrast in the work of industrialized cultures and the work of cultures that were considered to be less developed, with the suggestion that there was a difference in the qualities of work in the settings. But there were commonalities in work that he observed "...good mechanics, like good craftsmen in any walk of life, put pride *into* their work, doing with their whole being, with concern for others with whom, through their work, they are in contact" (p. 213).

Emery and Thorsrud (1976) conducted investigations among workers and their managers in Europe, Australia, and North America and identified some key ideas needed to create good work:

1. Adequate elbow room gives workers a sense that they are their own bosses and they usually do not have a boss breathing down their necks. At the same time, they are not left to determine what they are to do next.
2. Chances to set challenging goals and to learn on the job are provided with feedback of results in time to make adjustments.
3. Work can be varied to avoid boredom and fatigue while gaining the advantage of settling into a satisfying rhythm.
4. Gaining the help and respect of co-workers is facilitated by the conditions of work. Workers are not pitted against each other or placed in situations where there is no gain in helping each other and recognizing individual abilities and inabilities.
5. One's own work contributes to making society better and it cannot be done as well by a robot.
6. The work has a desirable future.

In studying jobs in the U. S. and Sweden, Karasek and Theorell (1990) concluded that "...the good jobs are good because they offer the potential for human development: learning, user-friendly tools,

responsibility, negotiable demands, stimulating challenges, co-workers as teachers, pride of accomplishment in creative achievement, customers whose growth restimulates the workers" (p. 314).

Questions should be asked about those who are to be served by the implementation of the concept of good work. It seems most apparent, from concerns expressed about the availability of good work and attempts to define it, that workers are to be served. These workers include those who are paid an hourly wage, those who occupy executive offices, and the many others who are arranged in between on the corporate organization chart. The concern for good work also applies to people who work in their own enterprises for profit, as well as those workers who never receive a monetary reward for what they do. All of these are workers and the disquietude of each of them about their work should be addressed. The problem becomes more complex, however, when the anxieties of investors about work are addressed.

Some may question whether investing is work. It can also be pointed out that most investors seem to have the rewards that work productivity can bring as their most immediate priority. Often these returns are viewed in the short term and not over the long haul. This can be in direct opposition to some of the qualities that workers include in their concept of good work. But in one of the convolutions of life in the western world, workers are also investors through such financial arrangements as stock options, individual portfolios, and pensions funds. Therefore, to conclude that the notion of good work should serve a particular class of workers is faulted by its lack of clarity and inclination toward self-centeredness. Further, it is doubtful that work shaped to satisfy only the base desires of the worker can sustain itself.

The survival of human life is dependent on the productivity of work. Economic systems use the production of goods and services to exchange for other goods and services. The exchange usually uses a monetary system and money or credit are used to accomplish transactions. Basic to this schema is productivity, of which work is a primary element. Productivity is a measure of the efficiency of transforming inputs into outputs and is often expressed as a formula in which productivity is equal to output divided by input. The resulting coefficient of productivity is always a fraction with a value less than one. Outputs can be classified as goods, services, and by-products. Inputs include raw materials, energy, capital resources, technology, and human resources (i.e., workers and their attendant characteristics). Therefore, if there are to be resources for the exchange of goods and services, there must be productivity, of which worker input is an essential element. Work, and good work in particular, cannot be created without a concern for the efficient transformation of the effort of the worker into some form of output. In the long term, there is no work without productivity.

This is not to suggest that workers should be intimidated into accepting efficiency of production as the focus of their work to the extent that they become willing to accept any conditions of work intended to increase productivity. The practice of Taylor's scientific management is almost universally

accepted, according to Levering (1988), and its logic continues "...to dominate the course of automation in the twentieth-century work place" (Zuboff, 1988, p. 42). The discerning worker is faced with the problems of identifying work that is good for the worker in the place of employment. This takes the worker beyond acquiring knowledge and skills to perform a job, to understanding the job within the context of the work group, organization for production, and the larger social purpose of what is being done, a la Addams and Dewey (Kliebard, 1990). It also brings workers to the need to understand principles of production in the enterprise of which they are a part. Ideally, this expanded understanding of how a job is performed will not be limited in use to the worker's self-interest but will find application in making decisions about the processes of production.

Threats to Good Work

Zuboff (1988) describes the changeover of eight corporations in a variety of economic settings to the use of smart machines. The skills of craft workers in paper mills, for example, were analyzed, digitized, and entered into a computer so the pulp making processes could be controlled by a machine and not require the specialized skill of a paper maker. It was no longer necessary to go down onto the floor where the pulp making vats were located because the data for decision-making and the reports of the decisions made were displayed on a video screen in the control room up above the paper making floor. While discussing the loss of overtime work, the reduced likelihood of jobs for their sons and daughters, the embarrassment of appearing incompetent in performing their changed jobs, and the possibility of the company not upholding its promise to not lay off workers, one mill worker concluded:

> I think the country has a problem. The managers want everything to be run by computers. But if no one has a job, no one will know how to do anything anymore. Who will pay the taxes? What kind of society will it be when people have lost their knowledge and depend on computers for everything? (Zuboff, p. 5)

Another frequently mentioned threat to good work is the electronic office in which clerical workers are subjected to psychological stressors previously not associated with this work. Makower (1981), identified four characteristics of this work:

1. Tasks are broken down into smaller and more monotonous components;
2. Job speed and processes are dictated by computers without regard for individual ability or preferences;
3. Supervisors can measure keystrokes, inputs, mistakes, time off, and other things; and
4. There is fear that automation will replace the worker altogether.

Another dimension of the quality of work is in jobs that are other than full-time. One case is the increase from 1980 to 1989 in the number of workers who held more than one job. In 1989 there were

7.2 million workers with more than one job compared with 2.5 million in 1980. Of all employed workers in 1989, 6.2% held more than one job. Of these, 44% reported that they needed two jobs to meet household expenses or to pay off debts they had incurred (Stinson, 1990). Another phenomenon is the classification of involuntary part-time worker. These are people who want full-time jobs but cannot find them. Most part-time workers prefer short hours but about 27% of them are involuntarily working part-time. An increase in the number of part-time jobs available was recession related, but employers used this form of employment to reduce their cost of fringe benefits including health insurance, vacations, and pensions. Also, part-time employment accommodates the shift in jobs from goods producing to service producing industries where a more flexible work schedule is needed (Lewis, 1991).

The contemporary work scene presents many violations of the human need for good work. Work is demeaned because some in society do not need to work while work is required of others. Creative work is limited to a small number of people. In many jobs, the work processes control the worker thereby reducing the work to a means of survival. One of the results is that the worker is ultimately alienated from the work. Acceptance of work as a gift has been replaced by motivation toward self-fulfillment and opportunity for advancement. Workers are dehumanized when they are cast as robots, farm implements, mules, and other machines and animals by their work. Machines can remove the worker's control of productive output, threaten replacement, and disrupt the distribution of access to work and the return in earnings.

Some threats to good work come from workers themselves. A worker may choose to seek self-fulfillment and advancement through work and eliminate elements that make work good. In other cases, the things that made a form of work good are removed and the worker's response is to redefine good work in terms of self-serving purposes that have acceptability in the contemporary work place. Ultimately, the perception of what work is good is changed, and the standards of good work are compromised by the immediate time and place.

There are ideals that describe what makes work good, and there are persistent threats to those principles. In some cases, deterioration of the quality of work has been accepted as a condition of having a job. Many workers may believe that they have no alternative, and for some that may be true. However, as workers gain an understanding of the concept of good work, they can set their efforts toward the accomplishment of that status.

The next section of this publication focuses on the concept of empowerment and processes of empowering workers. Of importance to those in technical colleges is the education for empowerment that can be part of the students' preparation for work.

CHAPTER 4

EMPOWERING WORKERS

Any striving, on the part of workers, for power should not be seen as completely self-serving. What is good for the worker, in many instances, is also good for the productivity of the organization, especially in the longer term. This principle is accepted by many employers and managers, but there are others who have not been convinced of the merit of the idea. There are many workers who do not understand the extent to which there are differences among the characteristics of jobs and that they can influence the conditions under which they work. Many of the attributes of jobs are in the work environment, including the place in which the work is performed, extrinsic rewards, relationships with coworkers and supervisors, the provisions given to the worker to do the job, and the quantity and quality expectations for production, among many variables. Other job distinctions are intrinsic and are in the relationship between the worker and the work. In all, the conditions of a job, the characteristics of the worker, and the context within which all of this comes together are very complex. Many workers enter the work place with an incomplete picture of what work is about and do not find the level of fulfillment that they should be able to secure. These conditions suggest dimensions of empowerment from which workers and their work could benefit.

Today's workers were yesterday's students. What students learn in school influences how they function as workers. The intention of worker empowerment begins with the concept of student empowerment and the assumption that all humans have inherent powers that can be enhanced.

Workers Can Be Empowered

A traditional concept of worker empowerment has been that of collective action. By organizing, workers have been to able to exercise collective power well beyond what they could accomplish individually. In the face of legal decisions favoring employers, company mergers and acquisitions, limited success in organizing many classifications of workers, and other handicaps, the case can be made that the power of workers has been reduced. On the other hand, Wheeler (1989) points out that in addition to exercising their power at the bargaining table, labor unions have responded to conditions of work through court action, by trying to shape public opinion and influence public policy makers, and through gaining employee ownership in the companies where they work. These are important forms of worker power, but there are other significant ways in which workers can be empowered in the work place.

Another source of worker power is in the distinctiveness of the abilities that they bring to the job. The laws of economics, practiced in a completely free market, lead to the conclusion that worker skills that are in shortest supply and highest demand will command the greatest earnings. The earnings of

athletes who have unique talent help to demonstrate this economic principle. The owners of athletic teams compete to have superb athletes on their teams by paying salaries, that in part, are justified by the potential of these performers to draw ticket buying fans to watch them play the game. However, even in the case of athletes and other entertainers, there is not a completely open market. There are rules, such as those held by a sport's league, that regulate the exchange between these employers and their employees. Frequently, contract disputes over athletes' conditions of employment are brought to the courts and, in addition, the United States Congress has passed controlling laws.

Workers with more common talents who are employed in the thousands of occupations in the world of work have the same form to power based on supply and demand as do unique workers. For example, the mechanic who can perform maintenance and repairs on jet engines has talents that can be replaced only by workers with similar abilities. When there are many airline passengers and large amounts of air freight, jet engine mechanics will be in demand. With demand high and supply low, employers of jet engine mechanics are willing to make concessions beyond what they would in other conditions of worker availability. Many of these concessions are economic, but others, such as flexible work hours or enhancement of intrinsic characteristics of the work, may not be considered in economic terms.

The power of workers based on their ability to perform certain tasks is being influenced by many forces, natural and contrived. Turnover of job incumbents who hold a particular set of capabilities can change the number of those who are available for employment and their comparative economic value. The introduction of more advanced technology can reduce the number of workers who possess the talents needed to perform work tasks. In a reorganization of work called deskilling, some jobs are subdivided into new jobs, none of which are as complex as the original job, so workers with fewer talents can be hired. Sometimes, organized labor has acted to control the number of entrants into a field of work with the affect of reducing the supply of some worker talents and increasing their value. As consumer demands for products change, some worker talents are in short supply and there is a surplus of others.

Thus, workers can be empowered collectively and individually. There are constant challenges to the power generated by either of these means and the conditions for workers to achieve power are changing, as illustrated by the examples of collective bargaining and the supply and demand for worker talents.

Empowering Technical College Students

Processes of education can be used to socialize individuals for their work roles in ways that benefit employers, as some see it, or they can be used to empower workers as well. Schools generate pressures, constraints, and limitations on the capacity of students and teachers to shape their own

realities. But this socialization does not have to be preparation for exploitation upon entry into the labor force. The physical environment of schools, organizational style, classroom social relations, instructional methodology, and evaluation and grading practices are examples of elements that contribute to the socialization experience of students and that can be used to empower them.

One of the strengths of technical colleges has been the empowerment of their students through the development of skills and abilities that are in demand in the work place. Students have been able to turn their capabilities into economic and other advantages in their interchange with employers. This preparation produces significant gains for students. Increasingly, however, this is not enough. Technical college graduates with abilities that are in demand may not be able to realize their advantage in the labor market because they do not understand well enough the context within which their work is performed. The worker who does not have a realization of the world labor market can be too easily surprised by the impact of work that is mobile. If there is no recognition of the difference between a work place that is hostile and one that is supportive of the worker, the employee is at a disadvantage that need not exist. These are conditions for which workers can be prepared in the technical colleges.

Technical colleges have the mission of preparing their students for employment and developing their potential to the greatest extent possible within that mission. Many writers, including Dewey (1916), Spring (1972), Bowels and Gintis (1976), and Giroux (1981) are clear that schools do not facilitate growth to the extent that they should when they decide on a particular set of socialization goals. Technical colleges influence the ways in which their students are socialized and how they will function in the work place. In addition to their technical skills, graduates bring social skills into the work place. Both sets of skills will be determining factors in how well the graduate serves the job and in how well the job serves the graduate. It may be demanding for technical college faculty members to be nonjudgmental about the application of technical and social skills in the work place, especially the social skills. However, it should be understood that the work place is not the same as experienced by those who are teaching or administrating programs in the technical colleges. The requirements to function effectively in today's labor force are different from what they have ever been before. Workers need to be empowered so they can fulfill their potential for their own benefit and that of their employers.

The Concept of Power

The notion of empowerment implicitly suggests that people possess the capability to exercise power. Dewey (1916) argued that to consider children as immature is only a comparative measure with the maturity of adults. Dewey stated, "Taken absolutely, instead of comparatively, immaturity designates positive force or ability, the power to grow" (p. 41).

The concept of empowerment embraces Dewey's idea that all human beings have the capacity for growth and development. While empowerment has been broadly defined, the fundamental meaning is focused on the possession by human beings of the inherent capacity to grow. Ashcroft (1987) suggests that empowerment is "bringing into a state of belief in one's ability/capability to act with effect" or "nurturing belief in capability and competence" (p. 145). Similarly, Simon (1987) defines empowerment as "to give ability to, to permit or enable" (p. 375).

Furthermore, Ashcroft (1987) suggests that empowerment, by its very meaning, is an ongoing action. She informs us that in its on-going nature, empowerment is distinguished as a process rather than a product. She states:

> The suffix "ing" as a verb ending designates a present tense, on-going action as in, "He is empowering others." That present participle with its action component can be used as other parts of the speech, for example, "Empowering raises self esteem" or, "Empowering conduct is essential." The question of on-going action, of process, is important to the concept of empowering which, like learning or becoming, is complete as long as living is complete. It is by definition a process and not a product. (p. 143)

However to view the empowerment process as only an ongoing activity is to ignore the meaning conveyed by the term empowered. The word empowered by its very meaning suggests an end product. Ashcroft (1987) gives an explanation of the contradiction between empowered and empowerment:

> While empower *-ed* is an internal contradiction in one sense, it is nevertheless possible to impose a stop action on a process and to evaluate interim degrees of empowerment (the state of being empowered). An empowered person, then, would be someone who believed in his or her ability/capability to act, and this belief would be accompanied by able/capable action. Since power has both capability and action components, the belief and resulting action are inseparable. (p. 143)

Empowered, empowerment, empowering are all from the root word power. One of the most comprehensive treatments of the topic of power was offered by French and Raven (1959). They identify five bases of power. These are coercive (the ability to punish or not), reward (ability to reward or not), legitimate (by virtue of social position), referent (through personal attraction, others wishing to identify with the person in power), and expert (recognized as having special knowledge and expertise). It is evident in the bases of power identified by French and Raven that they all ultimately can be interpreted to refer to an individual person and the inherent power they possess as in Dewey's explanation.

John Kenneth Galbraith (1983) offers an extensive analysis of power in his book, The Anatomy of Power. He suggests that there are three types of power and three sources of power (Figure 1). The three types of power are: (a) condign power (use of force or the threat of the use of force which prevents an individual, group, or country to act according to their own free will), (b) compensatory

power (win submission by the offer of something of value to the individual so submitting), and (c) conditional power (use of power which relies on the values and beliefs of the individual or group. The actions carried out seem to be of the free will of the individual or group on whom power is exercised).

	TYPES OF POWER		
Sources of Power	Condign	Compensatory	Conditional
Personality			
Property			
Organization			

Figure 1. Power Model.

Note. Adapted from The Anatomy of Power, John Kenneth Galbraith, 1983, Boston: Houghton Mifflin Company.

Galbraith also identified three sources of power: (a) personality (mental resource, precision and acuity, charm, seeming honesty, humor, solemnity, and other personal traits); (b) property (money, land, and such resources as information, knowledge, and skills); and (c) organization (business, health, education, military, management, labor or any other small or large group that has been organized around some defined purpose).

Galbraith suggests that power can be acquired by individuals and other groups. Acquired power can be enhanced and the exercise of power may help individuals and groups (corporations, countries, etc.) meet their desired goals. This concept coincides with Dewey's philosophy that all humans have inherent powers which can be enhanced. Therefore, *empowerment is a process by which human beings are enabled to meet their desired goals by enhancing their potential, capability, capacity, or powers.*

The power model (Figure 1) illustrates that the sources of power and the types of power interact with each other. The intensity of these interactions varies from one to another. While it is not possible to determine the exact degree of interaction between the sources of power and the types of power in any given situation, it promotes understanding of the nature of power, as a basis for understanding and implementing student empowerment processes in technical colleges.

Power of Personality.

Among Galbraith's three sources of power (personality, property, and organization) the power of personality is possessed by everyone and, as we have suggested earlier, can be enhanced. While the power of personality is one of the more obvious sources of power, its role, according to Galbraith, has been overestimated. Galbraith (1983) states, "An important tendency...is to exaggerate the role of the personality in the exercise of power" (p. 42). But the fact that the exercise of power associated with personality has been exaggerated does not negate its importance. His assessment is made in comparison with other types and sources of power which he contends are generally overlooked or not understood. Galbraith acknowledges the power of personality and identifies some of its specific traits. He states that "mental resources, precision and acuity, charm, seeming honesty, humor, solemnity, and other personal traits" (p. 40) are all important personality factors that give power to an individual.

The connotations associated with personal power in our culture and tradition are not very positive. A person who seeks personal power is seen as selfish, self-centered, egotistical, autocratic, or even evil. Galbraith (1983) comments on our general understanding of personal power and states that:

> Everyday language comments regularly on the reasons for which power is being pursued. If it is narrowly confined to the interest of the individual or group, one says it is being sought for selfish ends; if it reflects the interest or perception of a much larger number of people (for those who seek it) are thought inspired leaders or statesmen. (p. 9)

When students pursue power for their personal benefit, should we perceive them as merely egotistically motivated and self-serving? The exercise of power by students to assert their views, to pursue their instincts, to serve their goals, and to gain personally from an exercise of their power is desirable and worthwhile. Schools have a disempowering affect on students. Student voices are silenced and their "realities" often overlooked. Cummins (1986) argues that "students from 'dominated' societal groups are 'empowered' or 'disabled' as a direct result of their interactions with educators in the schools" (p. 21). The fact that schools, by their very nature, do not consider nor do they promote the exercise of the individual's powers was noted by John Dewey (1916) in the following manner: "Schools require for their full efficiency more opportunity for conjoint activities in which those instructed take part, so that they may acquire a social sense of their own powers and the materials and appliances used" (p. 40). Dewey is not only suggesting the use of personal power of the students in schools but is suggesting an involvement of the students in the manner in which schooling is carried out.

In a similar manner, Cummins (1986) has conceptualized a model for the empowerment of students of color which takes into account their personal powers and their involvement in the schooling process. He contends that the empowerment of students begins when:

> Minority student's language and culture are incorporated into the school program.
> Minority community participation is encouraged as an integral component of children's education.
> The pedagogy promotes intrinsic motivation on the part of students to use language actively in order to generate their own knowledge.
> Professionals involved in assessment become advocates for minority students rather than legitimizing the location of the "problem" in the students. (p. 21)

The power of personality should be viewed as an important source of empowerment for technical college students. Technical colleges can help students to develop their power of personality through classes and other activities of the school. Students can be given voice in school affairs and opportunities to express their personalities in significant events in the school. Accepting students as active and involved members of the school community and understanding their cultural backgrounds can enhance students' power of personality as part of the empowerment process.

However, the power of personality is exercised by teachers, administrators, staff, and others associated directly or indirectly with the technical college. It is in the give and take of the power of personality of everyone associated with the technical college and the varying degrees of interaction between the sources of power and the types of power that the concept of empowerment is best understood.

Property Power.

The second source of power identified by Galbraith (1983) is the power of property. One aspect of students' power of property is their financial contribution to the colleges and the communities in which they are located. Generally this financial property power takes the form of tuition, fees, and other living expenses students incur. This form of property power is well understood and is acknowledged by the technical colleges in a variety of different ways. The curriculum restructuring effort to attract more part-time students is both a function of serving the needs of the students and the need to generate more revenue for the college. Providing on-site day care for students' children is a service to the students, but it also assures greater revenues (through serving additional students) for the colleges. The same is true for recruitment, placement, financial aid, and many other important services provided for students. While the financial property power of students is well understood by the colleges, the property power of knowledge is not dealt with in the same empowering manner.

Knowledge, according to Galbraith (1983), is a form of property power. One of the strengths of the technical colleges has been the empowerment of their students through the development of skills and abilities that are in demand in the work place. This emphasis on skill achievement in and of itself is a

necessary part of the empowerment process for students. The importance of achievement within existing realities of school, home, community, and other environments, cannot be overemphasized. As Simon (1987) points out, "If we do not give youth a sense of how to 'make it' within existing realities, all too often we doom them to social marginality; yet another high-minded way of perpetuating the structural inequalities in society" (p. 375). The advantage of possessing excellent technical skills has permitted students to turn their capabilities into economic and other advantages in their interchange with employers. Increasingly, however, this is not enough. Technical college graduates with abilities that are in demand may not be able to realize the advantage that they have in the labor market because they do not adequately understand the broader dimensions within which their work is performed. In arguing for the context in which work is performed, Rehm (1989) suggests that, "Students should study general ideas related to vocational life such as the structure and nature of work and economics in society, the relations between work, family, and education, and varieties of work" (p. 116).

The worker who does not realize that the labor market is global can be too easily surprised by the impact of work that is mobile. If there is no recognition of the difference between a work place that is hostile and one that is supportive of the worker, the employee is at a disadvantage that does not need to exist. These are conditions for which workers can be prepared in the technical colleges. Students who learn about the socio-political realities of work and how these broader issues influence them individually are less apt to function as passive recipients of the decisions and actions made and taken on their behalf. They are more likely to help in shaping the place of work itself.

Knowledge and skills taught in technical colleges and other schools are often presented as a set of objective and neutral facts and concepts to be memorized and learned. Writers, such as Ravitch and Finn (1987) and Hirsch (1987), have contributed to the school conception of knowledge as a body of facts not to be questioned, analyzed, or critiqued. Banks (1991) questions this view of knowledge and points out that, "knowledge is dynamic, changing, and constructed within a social context rather than neutral and static" (p. 126). He goes on to state:

> To empower students...we must engage students in a process of attaining knowledge in which they are required to critically analyze conflicting paradigms and explanations and the values and assumptions of different knowledge systems, forms, and categories. Students must also be given opportunities to construct knowledge themselves so that they can develop a sophisticated appreciation of the nature and limitations of knowledge and understand the extent to which knowledge is a social construction that reflects the social, political, and cultural context in which it is formulated. (p. 126)

Arguing in a similar vein, Giroux, (1981) states that:

> Knowledge should be viewed as a shared process, a mediation between teachers and students, a creative political exchange that forges commonalities and the kind of critical reflection that allows all to be seen as both teachers and learners. Under such circumstances, knowledge is not treated simply as problematic, it becomes the vehicle for teachers and students to discuss its problematic grounding and meaning. (p. 68)

Commenting on how students in the technical colleges could be provided with broader knowledge about the skills they learn, Rehm (1989) provides curriculum and instructional strategies which can empower vocational education students. She states:

> A building construction project could be critically viewed from a number of angles: participation in the politics of housing, development of consciousness of various craft standards, contributions to the solution of a housing problem, and study of human values embodied in shelter. (p. 120)

Organizational Power.

Organizational structure and the power in organizing are related issues. While Galbraith refers to organizational power as a source of power available to those who can effectively organize, he does not negate or down play the power of the organizational structure in and of itself. At the heart of the power that students possess is their ability to organize. Galbraith (1983) comments that in the organization of individuals lies the greatest prospects of the ability to exercise power. He states:

> The use of the organization in modern times is for those who are willing to see it, clearly visible....the management-controlled corporation, the trade union, the modern bureaucratic state, groups of farmers and oil producers working in close alliance with governments, trade associations, and lobbies--all are manifestations of the age of organization. (p. 131)

Students in technical colleges, on the surface, are fairly well organized. Each college has, as specified by rule of the State Board of Technical Colleges, an officially elected student organization. Student organizations have the freedom to develop their own constitutions and become involved in all aspects of campus life. However, these student organizations are always assisted by an advisor from the faculty who has to have the approval and support of the administration. Under these circumstances students are organized, but their empowerment is compromised by the extent to which the college administration chooses to intervene.

The organizational structure of technical colleges is bureaucratic and hierarchical. The president reports to the superintendent, program administrators report to the president, and the teachers are under the supervision of the administrators, followed by students at the bottom of the organizational structure. Hierarchical roles within the organizational structure (which includes students, teachers, administrators, and other staff) have fairly well understood power and status relationships. There is also a set of rules (federal, state, and local) that govern the operation of the institution. Operational

decisions and actions taken in these institutions are generally carried out without any significant involvement by students. The power over students that results from the formal structure of the technical college is generally not recognized by students. In fact, students probably consider the organizational structure to be legitimate, right, and appropriate.

The organization and structure of schools tend to function in ways that disempower students. Technical colleges function in similar ways. Giroux (1981), commenting on the organizational and structural manner in which power relations function in schools, states:

> Power operates in the classroom in both visible and not so visible ways. On the visible level, hierarchical relations of power manifest themselves in top-to-bottom methods of communication, rigid time-schedules, rigid prescriptions about classroom behavior, and inflexible modes of evaluation. All of these practices make one thing clear: the student is viewed as a spectator rather than a choice-making participant. As such, democratized relationships are replaced by authoritarian encounters in which communiques are substituted for communications, lectures are consistently substituted for discussion, obedience is substituted for creativity, and formulas are substituted for critical thinking. (p. 83)

The organizational structure of technical colleges also refers to the assumptions, values, and beliefs that are inherently part of the structure. Appleton (1983) suggests that "This concept is based on the recognition that no structure is value free. Rather, the design of any given structure, whether intentionally or unintentionally, has an agenda imposed on all functions of that structure" (p. 237).

The empowerment of students means that assumptions, values, and beliefs about the organizational structure of the technical colleges have to be reflected upon to understand how the nature of that structure may be disempowering students. Furthermore, student organizations have to operate with sufficient autonomy to be able to contribute to the empowerment of students.

Types of Power

Condign Power.

Condign power is the direct use of force to accomplish an objective. This type of direct force is seldom used in this day and age and, under any circumstances, would be unacceptable and counter productive when used for personal reasons. However, for example, in the late 1960s students in many college campuses around the country occupied campus buildings often with the use of direct force or condign power. The use of condign power for the sake of social change or for the demands of the student body was not merely viewed as violent self-serving acts. Such student activism was considered to be a form of protest by many. However, they permanently reshaped college campuses throughout the country. Under some circumstances, even condign power is an appropriate source of empowerment, especially when it is combined with other sources and types of power.

Compensatory Power.

When an individual or group is able to win submission by the offer of something of value to another individual or group, compensatory power has be exercised. In the technical colleges the use of compensatory power over students manifests itself most predominantly in the form of grades being given to students. Commenting on this issue Bowels and Gintis (1976) state:

> The correlation between power and subordinacy in the classroom finds its most blatant expression in the grading process. Grades are used, in many cases, as "soft-cops" to promote social conformity and to enforce institutional sanctions. Grades become, in this case, the ultimate discipline instruments by which teachers impose their desired values, behavior patterns, and beliefs upon students. (p. 40)

A grading system in which students could negotiate the values and criteria to be used for the grades would empower them.

Conditioned Power.

According to Galbraith (1983), among all the types and sources of power, the exercise of conditioned power is the most pervasive and powerful. In the use of condign and compensatory powers, those submitting are aware of their submission--in one case compelled and in the other for reward. Galbraith states:

> Conditioned power...is exercised by changing belief. Persuasion, education or the social commitment to what seems natural, proper, or right causes the individual to submit to the will of another or of others. The submission reflects the preferred course; the fact of submission is not recognized. Conditioned power, more than condign or compensatory power is central...to the functioning of the modern economy and policy, and in capitalist and socialist countries alike. (p. 6)

Technical colleges employ, in conscious and unconscious ways, Galbraith's conditioned power over students. At the same time students assert themselves and their realities on the schools. Giroux (1981) comments on the socialization process of students by illustrating the power that the schools have over the students in the following manner:

> All school settings generate in a non-mechanical way pressures, constraints, and limits on the nature and feasibility of what teachers and students can do to "shape" their own reality. Class size, the use of school authority, community influences, and the ideology and strength of a school board all play a crucial role in determining how politically vulnerable human actors might be if they "innovated" or tried something different in their classrooms. The question of the overt and covert "rules and meanings" that govern decision making cannot be excluded from consideration when analyzing the relationship of theory to practice. (p. 107)

While the above assessment by Giroux is in agreement with Bowels and Gintis (1976), he takes a significantly different view point from them. He argues that students don't just compliantly follow the dictates of the school. He suggests that students challenge, disagree, and actively pursue their own

agendas rather than following the dictates and practices of the school. In illustrating this point, Giroux (1981) states that:

> Schools are not solely determined by the logic of the workplace or the dominant society; they are not merely economic institutions but are also political, cultural, and ideological identities that exist somewhat independently of the capitalist marked economy....Moreover, instead of being homogeneous institutions operating under the direct control of business groups, schools are characterized by diverse forms of school knowledge, ideologies, organizational styles, and classroom social relations. Thus, schools often exist in a contradictory relation to the dominant society, alternately supporting and challenging its basic assumptions. (p. 72)

He further argues this point by suggesting: "Clearly...students do not interpret the curriculum-in-use in a passive way. Like workers on the production line...students, though in different ways, often reject the basic messages and practices of schools" (p. 97).

Technical colleges should not become the intended or unintended tools of social, political, or economic interests that want to gain power for their own selfish purposes. There are other more important and beneficial reasons for worker empowerment. As individuals gain power to grow, to enhance their capabilities, and to realize their potential, they are empowered. This does not suggest an inevitability of conflict among individuals or between individuals and organizations. There are points where the growth of one will conflict with the growth of another and will need to be mediated, but this is not predetermined. For example, there may be a conflict between the needs of workers to gain a greater level of self-management on the job and the needs of management to introduce a new technology into the work place. Fortunately, much of the growth for workers will also be growth for employers. This is extensively illustrated by Karasek and Theorell (1990), who describe many forms of benefits that come to employers and employees when the work place is made healthier. The cases that they report go beyond safety, environmentally borne hazards, and employee wellness programs to conditions of stress placed on workers by the way in which the work is structured. Importantly, there are alternatives that are mutually beneficial for worker and employer.

CHAPTER 5

SUMMARY

The purpose of this publication is to describe how Minnesota's technical college students can be empowered by their vocational education to be full participants in the labor force and to deal with the changing nature of the world of work. To do this, the world of work is viewed in global terms. Additionally, the national, regional, firm, and job level environment is considered against this backdrop. Beyond this, the nature of work itself is examined, that is the existential or psychic manifestations of work--those aspects which have to do with the human spirit. The overarching logic of this study is that as the world of work changes in its macro (global, national, regional) and micro (firm, job) aspects, there are implications for the worker which are wide ranging. These include economics, of course, but more psychic aspects as well. Out of this conceptual approach, the generalizations set forth below appear prudent.

The Global World of Work

It is clear from this study, that more than being just a cliche, the global frame of reference, in its political, economic, and cultural aspects, has set the stage for many of the critical changes we now witnessed in the labor market and in the world of work. Understandings which appear to be necessary in this regard are the following:

1. Since the end of World War II, international trade has expanded in a way that has made many countries that were economically marginal now competitive with the traditional industrialized countries. With the expansion of trade between these newly industrialized countries (NICs) (South Korea, Singapore, Brazil, India, etc.) and the First World, and among themselves, the world order in international trade has changed. Third World countries have become important players not just in the traditional way (raw materials or agricultural crop production), but now in the manufacture of household and industrial goods.
2. With the expansion of international trade and the opportunities for direct investment in second countries which the General Agreement of Tariffs and Trade (GATT) has made possible, multinational companies (e.g., 3M, Pillsbury) have expanded their global reach and in so doing have made the global labor market a reality. When a multinational makes the decision to take its business to a foreign country, it means that it has widened its conception of the availability of labor. National borders do not constrain the labor force. This creates labor market tension between its parent country and the host country. In the parent country, opportunity for work is forfeited, and workers find themselves competing with their counterparts across borders far away, where the politics, culture, and social conditions are of a different hue.
3. With the reality of a globalized labor force, the traditional check which labor exerted on management by organizing has become virtually ineffectual. The power of unions has eroded. When companies threaten to take their business elsewhere if domestic wages are too high, it could mean to another country. Unions have limited power against such a threat.

4. The reality of a global economy and the fierce economic competition thus engendered has rendered the technologizing of industry and work to be absolutely an imperative. The primacy of technology has had implications such as the reduction of the labor force in manufacturing, the deskilling and simplification of jobs, job obsolescence, and the dehumanization of work.
5. The search for formulae which would lead to international competitiveness has led to new interest in the U. S. in cross-cultural comparisons, and to the introduction of foreign modes of management such as participative management. This has led to a gradual flattening of the occupational pyramid in U. S. companies and to the attendant dislocation of those involved.
6. Global competition and the primacy of technology has made many traditional industries non-competitive in the U. S. such as primary steel production. This has led to erosion of the manufacturing base of the U. S. economy.
7. Competition in a range of manufactured goods is now dominated by countries that have recently entered that market such as Japan and South Korea. Not being encumbered by an industrial tradition, the NICs enter the market at the cutting edge of technology. Beyond this, they operate under the umbrella of governmental protectionism which shields their domestic market, allowing fledgling companies to develop away from the heat of competition. Protectionism has become a contentious issue in the global economy.

National Manifestations.

Global competition, Third World debt, and the long reach of multinationals overseas have combined to shape the domestic or national labor market in important ways. These include:

1. The domestic economy has been plagued by balance of trade problems since the mid 1970s, that is, the dollar value of U. S. imports has exceeded that for exports. This has had a dampening effect on the labor market.
2. There has been a marked decline of primary industries, notably steel production, leading to plant closings and the dislocation of entire communities.
3. Traditional manufacturing industries (such as electronics and automobiles) which once gave the U. S. competitive superiority, have now declined markedly in the face of foreign competition. Again, the labor market effects here have been disruptive.
4. With the overall decline of the manufacturing base of the domestic economy, the corollary is that within the last two decades new job opportunities have tended increasingly to be in the services sector of the economy. Many of the jobs in this sector, however, do not replace the quality of jobs lost by manufacturing and often are low pay-low skill and tend to be the preserve of late labor force entrants such as women, ethnic and racial minorities, and new immigrants.
5. With the changing demographic picture engendered by the entry of increasingly significant numbers of women, ethnic and racial minorities, immigrants, and persons with disabilities, the national labor market has markedly changed in structure and form. To maximize the contributions of these new entrants requires their smooth assimilation into the culture of the national work place. This assimilation process presents a challenge to firms that has critical productivity consequences. Productivity in the future may hinge upon authentic democratization of the work place, a precondition for which would be the empowerment of all workers, particularly the non-traditional ones.
6. The entrance of foreign multinationals in the U. S. economy (e.g., the establishment of auto manufacturing plants by Japanese companies in U. S. communities) has brought the global nature

of the world of work home to average citizens, who find themselves having to conform to new work place norms.

7. Domestic companies have been finding it necessary to establish joint ventures, or coproduction arrangements with foreign firms, in order to stay afloat. When these joint arrangements occur, they invariably lead to changes, however subtle, in the culture of the domestic labor market. For example, top management may be foreign and work place practice such as calling superiors by their first names may have to change.
8. Mergers and acquisitions of firms have become commonplace as companies seek to gain economies by assuring backward and forward linkage possibilities within their own sphere of operations. This often has stress producing consequences in the work place, particularly where corresponding dislocations which invariably attend them include relocation, job redesign, or retrenchment.

Regional Manifestations.

There are regional variations in the national labor market, made clear by migrations in the last decade or so, both of people and firms from one part of the country to the other in search of more lucrative or secure opportunities. Some of the sources of these variations include:

1. Traditional industrial centers of the northeast have experienced dislocations as the steel industry in particular succumbed.
2. The decline of the auto industry has ravaged some mid-western communities.
3. New technology-rich communities, such as Silicon Valley, have emerged. Here the demand is for a talented pool of knowledge workers.

Firm Level Manifestations.

Macro level changes in the economy and in the labor market have had their effects at the level of the firm. Some of these effects include the following:

1. There has been a trend toward a more participatory style of management with the consequence that the middle layer of the organizational structure of firms is disappearing. The supervisors and managers within this layer are being dispensed with as organizations become flatter.
2. Domestic multinationals have been quick to take advantage of off-shore opportunities to expand their operations, with the consequence that workers in domestic firms compete not only in the domestic labor market but in the international one as well. This has implications for factors such as wages, conditions of work, and job security.
3. The increasing trend toward participative management, combined with the ready availability of labor off-shore has served to denude the power and appeal of trade unions. Unions have lost much of their power in a labor market that is increasingly without boundaries.
4. Changing demographics have introduced tension within firms as new constituencies of labor seek to become assimilated.
5. For a host of reasons (including lack of competitiveness, and reliance on technology), many workers find themselves either with less work, less rewarding work, or in increasing numbers, no work.

The net impact of changes, both macro and micro, in the nature of the economy and the world of work is that work itself has become a source of tension. Many values learned about how we relate to a higher-order being or to fellow humans through work have been invalidated by the conditions under which much work is performed. This is manifested by the following:

1. Work is important to people in the U. S. and it provides a means to gain access to the goods and services of the society.
2. There is a present and historic need for jobs that will meet the needs of those who work in them.
3. Jobs are changing in content, form, and complexity. Some are disappearing, never to return, and others have been reduced to part-time.
4. Due to uncertainties of layoff and threatened layoffs, many jobs are attended by insecurity.
5. The desirability of many jobs has been reduced by electronic monitoring and accountability, machine pacing of work speed, and added information availability.
6. Some results of mechanization have been job simplification, increased worker safety, and reduced job tedium.
7. Increases in the number and level of responsibilities focused in one job has added to job stress in many cases.
8. In many jobs there is a loss of work ownership and an increased reluctance by workers to identify themselves by their work.
9. Qualities of work that are deemed desirable by workers do not need to fall victim to changes that are intended to increase the efficiency and economic competitiveness of an employer.
10. Changes in work that are good for the worker are generally good for the employer as well.

CHAPTER 6

IMPLICATIONS FOR THE TECHNICAL COLLEGE SYSTEM

Given the macro and micro considerations set forth above, what then are the implications for the approach of the technical college system to the task of preparing workers who are empowered to cope with labor market and world of work realities? To address this, policy and practice considerations are to be taken into account.

Implications for Policy

1. There appears now to be a compelling need for vocational education policy makers in the state to deliberately make the global economy the backdrop of the work of the technical colleges. They can do so by broadening the discourse which attends justification of programs, to include concerns which, far from being local or parochial, reflect the reality of the global marketplace.
2. Vocational education policy makers could facilitate the information flow necessary for reflecting the global context in programs, by establishing linkages between the technical college system and outward looking agencies (e.g., the World Trade Center) in the State. Information (i.e., on international trade, the availability of venture capital, the activities of Minnesota multinationals, sectoral employment trends and possibilities) must come to play an even more important role in the strategic planning and forecasting which must attend the management of the technical college system.
3. Vocational education policy makers could facilitate the overhauling of the approach to curriculum suggested by work changes. Information about these changes should be made available to those who are in positions to introduce new context into the course of study.
4. Vocational education policy makers may be compelled to rethink the requirements for teaching credentials in the technical college system. All the signs point to the need for more reflective instructors and for the infusion of a greater degree of rigor into the process of vocational teacher preparation. In-service and pre-service preparation of vocational teachers may have to be reviewed in light of the flexibility which the unfolding world of work would seem to demand of instructors in particular.

Practice

Implications for practice are further subdivided into **curriculum** and **instruction** aspects.

Curriculum.

The technical college curriculum is considered to be much more than an expression of what is required to meet the specifications required for job competency. Since jobs can be expected to change in the future, or to disappear altogether, the curriculum has to reflect constants, (i.e., knowledge and skills that have a somewhat timeless, or at least transferable, characteristic). More specifically, empowerment of the technical college student through the curriculum would require the following:

1. All students should leave technical college programs with knowledge that includes such aspects as world geography, world trade, the economy of the state and its interdependence both national and global, macro-economics, and the sociology of group behavior. The new realities of the work place would necessitate this knowledge.
2. Reflection of the perspective of the worker in the work place requires a deliberate attempt to teach students their work place rights and privileges as dictated by the law and the constitution. This further requires a curricular stance that views students not only as prospective workers but also as learning and growing individuals. Coursework should include practical lessons of worker empowerment.
3. Technical colleges should recognize that jobs not only fulfill employment needs but also fill a variety of value related needs for those who would perform them. This may mean providing more information about job selection, retention, and career development.
4. There is a need for those entering the work place to recognize that there are alternative ways in which work is organized, managed, evaluated, and compensated. Purposes of a job and its social and economic utility are a perspective needed by job entrants.
5. The curriculum should convey to students that in spite of labor market constraints, workers do have opportunities to select and shape their work. To aid students in selecting rewarding work upon graduating, the curriculum of the technical colleges should help students to understand alternative ways in which work is organized, managed, evaluated, and compensated.
6. By their very ethos, technical colleges could be made to reflect the transformed work place.

Instruction.

Instructionally, the implications of labor market and world of work changes for the technical colleges include the following:

1. The choice as to what are the enduring aspects of jobs would have to be made with greater care. That is, content, the very essence of instruction, would have to assume primacy if we are not to teach for obsolescence.
2. Practices of student evaluation and grading need to be examined in light of their effect on the socialization of students.

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